MONITOR WELL PRE-SPUD PROPOSAL

1) WELL NAME/NUMBER: BW-3

2) PROPOSED LOCATION: (a) General (on or off-site) on-site
(attach map) Site Area W. Boundary 600 Area
(b) Sect 2 Twnshp 21S Rng 3E NW ¼ SW ¼ NW ¼

3) WELL PARAMETERS:
(a) Est. total depth 180 (ft) (b) Est. ground elevation 4730 ft
(c) Anticipated stratigraphy:
Alluvium from 0 ' to 150 ' (depth)
Andesite (Orejon) from 150 ' to TD ' (depth)
_____ from _____ ' to _____ ' (depth)
(d) Anticipated water bearing horizon(s):
_____ at _____ ' (depth)
_____ at _____ ' (depth)
(e) Anticipated static water level 150 ' (depth)

4) WELL PURPOSE/JUSTIFICATION (attach maps and table if needed):
This is a facility boundary well intended to determine the thickness of saturated alluvium (if any) and the levels of contaminants flowing off the facility boundary at this location. If sufficient saturated alluvium is present, a standard water table completion (20 foot screen) will be utilized. If saturated alluvium is thin (<10 feet) or non-existent, a 10-foot screen in the water bearing horizon or fracture will be used. If saturated alluvium is encountered, a single core will be extracted.

5) PROPOSED DRILLING PARAMETERS:
(a) Drilling method(s): (air/foam/mud rotary/auger/etc.)
Mud Rotary ' from 0 ' to 80 ' (depth)
Air Foam Rotary ' from 80 ' to TD ' (depth)

Air-foam method: "Quik-Foam" surfactant/water mixture used in conjunction with filtered compress air.

Well Completion:

100# bags 16/40 sand:	5	bags
100# bags 10/20 sand:	0	bags
100# bags 8/14 sand:	0	bags
100# bags 8/20 sand:	7	bags
94# bags cement:	60	bags
5 gal. buckets bentonite:	4	buckets
50# bentonite powder:	6	bags

Surface Casing:

94# bags cement: approximately 10 bags

50# bags bentonite powder: 10 bags

Pertinent Field Notes:

8/12/88	Drilled 12 1/4", 0'-45' using mud rotary.
8/13/88	Drilled 12 1/4", 45'-71' using mud rotary.
8/16/88	Drilled 71'-200', 7 7/8" bit, using air-foam rotary. Orejon Andesite contact at 171' below grade. Overlying alluvium is either 1) in vadose zone, 2) has a very low porosity. Did not encounter noticeable water while drilling.
8/17/88	Drilled 200'-232', 7 7/8" bit, using air-foam rotary, borehole static 185. Noticed metal shavings in cuttings at 232'. Bottom joint sheared off and rotated on sub. The bit, stabilizers (2) and subs are still in bottom of hole (- 232').
8/18/88	Borehole static - 201.5'. Could not retrieve bit from hole with an overshoot fishing tool.
8/19/88	Completed well via plugging off stuck bit/stabilizer. The well casing was installed with 14 feet of bentonite (two different plugs separated by 5 feet of 16/40 sand) between stuck bit and bottom of well casing. The bit and stabilizers should not cause future problems (i.e., biased samples) due to the integrity of the above-described bentonite plugs (see well completion diagram).
8/24/88	Well grouted to surface.
8/25/88	Pad poured and brass cap emplaced in pad. Static water level at 169.5' below top of casing.
8/24/88-9/8/88	Well development. See development sheet for details.